Amendments to the Claims

Claim 34. (currently amended) A resonant beam scanning system, comprising:

A beam generator operable to produce an electromagnetic beam,

a first mechanically resonant beam director operable to scan the electromagnetic beam sinusoidally across a first axis at a first resonant frequency,

a second beam director operable to simultaneously scan the electromagnetic beam in a second axis at a second frequency,

a third mechanically resonant beam director operable to simultaneously scan the electromagnetic beam in the ~~first~~ second axis, and

~~river~~ control electronics circuit coupled to the three beam directors, the ~~driver~~ control electronics circuit operable to provide a signal to the third beam director comprised of a primary frequency and at least one higher order harmonic frequency.

Claim 35. (previously presented) The resonant beam scanning system of claim 34:

wherein the first and second beam directors are mechanically combined as a scan plate and gimbal ring.

Claim 36. (previously presented) The resonant beam scanning system of claim 35:

Wherein all three beam directors are mechanically combined as a scan plate and nested gimbal rings.

Claim 37. (previously presented) The resonant beam scanning system of claim 36:

wherein the beam directors include at least one mirror positioned to receive the electromagnetic beam.

Claim 38. (previously presented) The resonant beam scanning system of claim 34:

wherein the beam generator is mounted on at least one of the beam directors.

Claim 39. (previously presented) The resonant beam scanning system of claim 34:

wherein the electromagnetic beam is a beam of light.

Claim 40. (previously presented) The resonant beam scanning system of claim 39:

wherein the beam of light includes red light.

Claim 41. (previously presented) The resonant beam scanning system of claim 39:

wherein the beam of light includes infrared light.

Claim 42. (previously presented) The resonant beam scanning system of claim 39:

wherein the beam of light includes ultraviolet light.

Claim 43. (previously presented) The resonant beam scanning system of claim 34

wherein the primary frequency is substantially equal to the resonant frequency of the third beam director, and

the at least one higher order harmonic frequency includes at least one odd harmonic.

Claim 44. (previously presented) The resonant beam scanning system of claim 43:

wherein the at least one odd harmonic includes the third harmonic.

Claim 45. (previously presented) The resonant beam scanning system of claim 34:

wherein the second beam director is operable to scan the electromagnetic beam in substantially a sawtooth pattern.

Claim 46. (previously presented) The resonant beam scanning system of claim 45:

wherein the third beam director is operable to scan the electromagnetic beam in substantially a sawtooth pattern.

Claim 47. (previously presented) A method of driving a MEMS scanning system,

comprising the steps of:

generating first and second respective periodic signals for driving first and second scanners;

generating a third periodic signal comprising a primary frequency and at least one odd harmonic for driving a scanner; and

transmitting the first, second and third respective signals to a MEMS scanning system.

Claim 48. (previously presented) The method of driving a MEMS scanning system of claim 47, wherein:

the first periodic signal is a sinusoidal waveform; and

the primary frequency of the third signal is equal to twice the frequency of the first periodic signal.

Claim 49. (previously presented) The method of driving a MEMS scanning system of claim 48, wherein:

the first periodic signal has a frequency substantially equal to a horizontal scan frequency.

Claim 50. (previously presented) The method of driving a MEMS scanning system of claim 47:

wherein the second periodic signal has a frequency substantially equal to a frame rate.

Claim 51. (previously presented) The method of driving a MEMS scanning system of claim 50:

wherein the second periodic signal is a sawtooth waveform.